REMARKS/ARGUMENTS

The present response is intended to be fully responsive to the rejection raised in the Office action, and is believed to place the application in condition for allowance. Further, the Applicants do not acquiesce to any portion of the Office Action not particularly addressed. Favorable reconsideration and allowance of the application is respectfully requested.

In the Office action, the Office noted that claims 1-5 are pending and rejected. Applicants, respectfully, traverse the rejection and submit that none of the claims now pending in the application are obvious under the provisions of 35 U.S.C. § 103. Thus, Applicants believe that all of these claims are in condition for allowance.

REJECTION

Applicant's Response to the 35 U.S.C. § 103(a) Rejection of claims 1-5

The Office rejected claims 1-5 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,653,234 issued to Kim et al. (hereon after "*Kim*") in view of U.S. Patent No. 5,735,797 issued to Muzilla et al. (hereon after "*Muzilla*") further in view of U.S. Patent No. 6,859,659 issued to Jensen et al. (hereon after "*Jensen*").

As the Examiner is aware, to establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claimed limitations. The teaching or suggestions to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. *In re Vaeck*, 947 F. 2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Furthermore, the courts have repeatedly stated that a prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. *W.L. Gore & Associates, Inc. V. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983).

In the Office Action, the Office insinuated that the combination of *Kim*, *Muzilla* and *Jensen* discloses all the elements recited in claim 1. In support of the rejection, the Office indicated that "[i]t would have been obvious at the time the invention was

made to one of ordinary skill in the art to modify Kim's filtered image of fig. 2, num 114 of obtaining a velocity measure with Muzilla's teaching of obtaining a velocity measure represented in Muzilla in fig. 9 as VELDATA based on interpolating in fig. 9, num 124A, because Muzilla's teaching provide a visual display of flow data such as velocity instead of just obtaining velocity as done in Kim." *Office Action*, at page 4. In addition, the Office indicated that "[i]t would have been obvious at the time the invention was made to one of ordinary skill in the art to modify Kim's typically autocorrelation with Jensen's teaching of traditional autocorrelation with the new autocorrelation, because Jensen's new autocorrelation is "new and improved." Applicants respectfully disagree.

Claim 1 recites a combination of elements directed to a method of image filtering. The combination of elements includes "(a) computing a modified auto-correlation in a single direction for each pixel in an image; (b) filtering said image with a lowpass filter, wherein said filtering adaptively changes; and (c) interpolating said image and said filtered image from step (b) wherein said interpolating at said each pixel depends upon said modified auto-correlation in said single direction."

Kim discloses an "apparatus and method for removing noise from a signal… by filtering S9x) through a low pass filter having an adjustable pass band…." *Kim*, at Abstract. *Muzilla*, on the other hand, discloses an "ultrasound imaging system fir displaying edge-enhancement topographic flow power data surrounding by B-mode anatomic data without masking out any significant edge-enhanced topographic flow power data and without displaying any significant flow power background noise." *Muzilla*, at Abstract. Conversely, *Jensen* discloses a method and apparatus for "estimating the velocity vector of remotely sensed object or group of objects using wither ultrasound or electromagnetic radiation." *Jensen*, at Abstract.

It is Applicant's opinion that neither *Kim*, *Muzilla* nor *Jensen* suggest or show a motivation for modifying the reference or to combine the reference teachings. In addition, it is Applicants' opinion that there is no evidence in either prior art that shows a "reasonable expectation of success" in combining the references. Thus, it is Applicant's belief that a prima facie case of obviousness has not been provided.

As a result, Applicants submit that, at the time Applicant's invention was made, it would <u>not</u> have been obvious to one of ordinary skill in the art to modify *Kim's* teaching with the teaching of *Muzilla* or *Jensen*. To the contrary, *Kim* discloses a method and apparatus to remove noise from a signal, *Muzilla* discloses an "ultrasound imaging system", while *Jensen* discloses a method "for estimating the velocity vector

of a remotely sensed object or group of objects." Therefore, Applicants submit that *Kim*, *Muzilla* and *Jensen*, alone and in combination, do not teach or suggest all the elements recited in claim 1.

Claims 2-5, depend, directly or indirectly, from independent claim 1 and necessarily include all the limitations of claim 1. Since Applicants submit that *Kim*, *Muzilla* and *Jensen*, alone and in combination, do not teach all the elements of claim 1, Applicants also submit *Kim*, *Muzilla* and *Jensen*, alone and in combination, do not teach all the elements of claims 2-5. Thus, Applicants submit that claims 1-5 meet the requirements of 35 U.S.C. § 103(a) and are in condition for allowance. Applicants respectfully request reconsideration and withdrawal of the rejection to claims 1-5.

CONCLUSION

In view of the foregoing, the Applicants submit that none of the claims presently in the application are obvious under the provisions of 35 U.S.C. § 103(a). Consequently, the Applicants believe that all these claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Office believes that any unresolved issues still exist or if, in the opinion of the Office, a telephone conference would expedite passing the present application to issue, the Office is invited to call the undersigned attorney directly at 972-917-4365 or the office of the undersigned attorney at 972-917-0995 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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By: /Mirna Abyad/
MIRNA ABYAD
Registration No. 58,615
Texas Instruments
P.O. Box 655474, M/S 3999
Dallas, TX 75265
Telephone: (972) 917-4365